



DESCRIPTION OF MAP UNITS

Qam	Alluvial mud (Holocene)Mud and silt deposited by ponding behind unbrea parts of Lake Bonneville barrier beach.
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Alluvial and eolian deposits (Holocene)--Mixed fine-grained deposits of alluvial and eolian origin. Mostly silt and fine sand, red and brown in color.

Deposited within low-gradient alluvial systems along floodplains, and by

eolian reworking of fine-grained materials deposited by Lake Bonneville.

Younger alluvial-fan deposits (Holocene)--Stream and fan deposits of poorly sorted gravel, sand, and silt. Deposited within and at mouths of canyons and gullies, along alluvial floodplains bordering streams, and as sediments in stream channels. Colluvium included locally.

Qla Lacustrine and alluvial deposits, undivided (Holocene and Pleistocene)--Varied, complexly interlayered deposits of lacustrine and alluvial origins.

Landslide deposits (Holocene and Pleistocene)--Displaced deposits of disaggre-

Landslide deposits (Holocene and Pleistocene)--Displaced deposits of disaggregated rock and colluvium that form hummocky terrain. Larger detached masses of bedrock are not distinguished as landslide deposits, but are mapped as gravity-slide blocks, identified by bedrock unit symbols.

Talus and colluvium (Holocene and Pleistocene)--Blocky deposits on talus slopes; unsorted colluvium along lower part of mountain.

Lacustrine marl (Pleistocene)--White and pale tan, laminated marl containing clay, silt, and sand.

Lacustrine sand (Pleistocene)--Brown sand in sheets as much as 3 meters (10 ft) thick. Most deposits are just below the Bonneville shoreline.

Lacustrine fines (Pleistocene)--Silt, fine sand, and clay forming light-colored, irregularly shaped patches below the Bonneville shoreline west of the Pilot

Lacustrine gravel (Pleistocene)--Moderate- to well-sorted, rounded pebbles and cobbles, with sand and silt matrix.

Older alluvial-fan deposits (Pleistocene)--Poorly sorted gravel and sand forming piedmonts flanking the Pilot Range. Mostly stream and fan deposits; colluvium included locally. Overlain by deposits of Lake Bonneville.

Oldest alluvial-fan deposits (Pleistocene and Pliocene?)--Unconsolidated to partly consolidated, poorly sorted boulder, cobble, gravel, sand, and silt alluvial deposits forming raised surfaces. Surfaces typically littered with large boulders (2-6 meters; 7-20 ft) of white quartzite. In places contains extensive pedogenic calcite.

Felsite (Oligocene?)--Light-gray felsite containing sparse phenocrysts of subhedral quartz, plagioclase, and alkali feldspar in an aphanitic, pale-gray groundmass; rarely contains biotite. Largest outcrop is at mouth of Marble Canyon.

Canyon.

Bettridge Creek Granodiorite (Eocene)--Light-gray, medium-grained, subequigranular, biotite-hornblende granodiorite. Weak magmatic foliation. U-Pb

age of zircon is 38.9 ± 0.9 Ma (Miller and others, 1987).

Granodiorite dikes (Eocene)--Biotite-hornblende granodiorite and biotite granodiorite porphyry typically with medium-gray, aphanitic groundmass.

More mafic rocks present locally. Forms dikes and small bodies.

Miners Spring Granite (Jurassic)--Light-gray to white, medium-grained, felsic granite and pegmatite with small amounts of biotite and muscovite. Forms dikes and small bodies, all fully crystalline. Composition ranges from syenogranite to monzogranite. U-Pb age of zircon is 155 to 165 Ma (Miller and others, 1987). Tectonic foliation in granite is concordant with that in

metamorphosed country rock.

Ely Limestone (Pennsylvanian)--Gray and brown, medium- to thick-bedded limestone and argillaceous and cherty limestone; fossiliferous.

Chainman Shale (Mississippian) and Diamond Peak Formation (Pennsylvanian and Mississippian), undivided--Dark-gray and black shale, and dark-gray, dark-brown, and black arkosic sandstone and conglomerate with quartz, chert, and feldspar clasts.

Joana Limestone (Mississippian)--Massive to thick-bedded, unusually pure limestone. Dark-gray to black, coarse-grained limestone with abundant black chert and crinoid fragments in upper part. Light gray and fine grained in lower part.

Guilmette Formation (Devonian)--Light-gray weathering, dark-gray, blue-gray, and black, thick-bedded limestone. Throughout unit, rock displays prominent bedding planes or laminations and is fossiliferous. Sedimentary breccia and soft-sediment slump features common.

Simonson Dolomite (Devonian)-- Interlayered dark- to medium-gray and lightgray, calcareous dolomite forming steep slopes with distinctive banding. Most beds finely laminated.

Ely Springs Dolomite (Ordovician)--Dark-gray to black, faintly bedded, fractured, calcareous dolomite.

Eureka Quartzite (Ordovician)--White and light-gray orthoquartzite. Well size-

sorted and well-rounded medium quartz sand grains are indented by pressure

solution, and in places are partly recrystallized. Highly fractured in most exposures.

Lehman Formation (Ordovician)--Thin-bedded, gray, fossiliferous limestone.

Contains sandy and silty beds and dark dolomite in uppermost part.

Kanosh Shale (Ordovician)--Green and brown, calcareous siltstone and gray-brown, silty limestone.

Garden City Formation (Ordovician)--Massive, gray limestone and thinly

interbedded blue-gray limestone, gray and brown silty limestone, and brown calcareous siltstone. Locally bioclastic or cherty.

Notch Peak Formation (Ordovician and Cambrian)--Massive, gray limestone and

Notch Peak Formation (Ordovician and Cambrian)--Massive, gray limestone and less common brown, silty limestone. Locally pisolithic or cherty.

Limestone (Cambrian?)--Dark-blue-gray and medium-gray limestone with silt partings and zones of poids; much is doloralized and highly fractured.

partings and zones of ooids; much is dolomitized and highly fractured.

Toano Limestone (Cambrian)--Dark-gray to black, platy, laminated and thin-bedded, silty limestone; phyllitic where slightly metamorphosed. White to light-gray and tan, micaceous, coarsely crystalline marble where more highly

metamorphosed east of Pilot Peak.

Killian Springs Formation, undivided (Cambrian)--Dark-colored, graphitic and calcareous phyllite; forms gentle to moderate slopes. Where highly metamorphosed east of Pilot Peak, divided into:

Quartzose member--Quartzose and calcareous phyllitic argillite, pelitic schist,

metamorphosed east of Pilot Peak, divided into:

Quartzose member--Quartzose and calcareous phyllitic argillite, pelitic schist,
and calcareous quartzite. Unit is typically brown, tan, or green in color and
thin bedded.

Lower member--Black, graphite-andalusite schist.

Prospect Mountain Quartzite (Cambrian and Late Proterozoic)--Light-colored, prominently bedded and cross-laminated quartzite forming massive cliffs. Contains minor feldspar and mica in most places.

McCoy Creek Group of Misch and Hazzard (1962) (Late Proterozoic)--Alternating phyllitic argillite and quartzite units. In this area, consists of:

Unit G--Dark-gray and green phyllitic argillite and metasiltstone with interbedded marble and quartzite.

Conglomerate subunit--Dark- to light-gray conglomerate and coarse-grained arkosic quartzite alternating with dark-brown, rhythmically bedded phyllitic argillite and metasiltstone. Subdivided in north part of quadrangle.

Unit F--Gray, well-bedded and cross-laminated, cliff-forming quartzite. Lenticular conglomerate at top contains rip-up clasts of phyllite, boulders and cobbles of quartzite, and rare jasperoid clasts.

Unit D--Poorly bedded to massive, cliff-forming quartzite and conglomerate.

Generally gray, poorly sorted, and feldspathic.

Unit C--Laminated, yellow-green and silvery-brown phyllitic argillite, slate,

Unit E--Brown, laminated phyllitic argillite and metasiltstone.

and metasiltstone.
Unit B(?)--White or gray, laminated, crystalline calcite marble; contains sparse, minor white mica, tremolite, or quartz.
Unit A(?)--Divided into:

Schist subunit--Pale green, crenulated, coarsely crystalline actinolite schist; brown, quartzose schist; and mafic metaigneous gneiss.

Lower subunit--Interbedded flaggy metaquartzite, conglomerate, schistose quartzite, and schist.

	FORMATION		SYMBOL	THICKNESS feet(meters)	LITHOLOG
	Lim	Ely nestone	lPe	820 + (250 +)	
Chainman Shale and Diamond Peak Formation, undivided			IPMcd	1230+ (375+)	
		oana estone	Mj	415 (125)	
Guilmette Formation			Dg	1130+ (350+)	
		nonson Iomite	Ds	605 (185)	
	Ely :	Springs Iomite	Oes	160 (50)	
	Eu	reka artzite	Oe	490 (150)	
		hman mation	OI	200 (61)	
Kanosh Shale			Ok	302 (92)	
		arden City mation	Ogc	655 (200)	
	Note	ch Peak mation	O€np	520 (180)	
		estone	€I	uncertain	
Toano Limestone		€t	1080+ (330+)		
	Sp	illian orings mation	€ks	985 (300)	
Prospect Mountain Quartzite			€Zpm	3100 (955)	
	Unit G	upper subunit	Zmg	1175 (360)	
		conglomerate subunit	Zmgc	400 (120)	000000
McCoy Creek Group	Unit F		Zmf	1400 (425)	
	Unit E		Zme	820 (250)	
	Unit D		Zmd	720 (220)	
	Unit C		Zmc	820 + (250 +) ?	
	Unit B?		Zmb	510+ (155+)	+++++++++++++++++++++++++++++++++++++++
	schist subunit		Zmas	260 (80)	~~~~
	Unit A?	lower subunit	Zma	1480 + (450 +)	~ ~ ~ ~
	٦	Subunit			

